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09/932,229	08/17/2001	Kai Ahrens	30014200-1008	4840

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STRANGE, AARON N

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)
Office Action Summary	09/932,229	AHRENS ET AL.
	Examiner	Art Unit	
	Aaron Strange	2153	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>16 November 2007</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-40</u> is/are pending in the application.

   4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-13,15-27,29-31,34-37,39 and 40</u> is/are rejected.

7)☒ Claim(s) <u>14,28,32,33 and 38</u> is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

   Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

   Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

   * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

1.   The Examiner would like to note that the present Application has been

reassigned to a new Examiner.

Response to Arguments

2.   The Examiner notes and acknowledges Applicant's statement that "the invention

of the present application was subject to an obligation to assign to the common

assignee of *Gupta*, namely Sun Microsystems, Inc., at the time the present invention

was made" (Remarks, 10). Accordingly, the rejection based on Gupta has been

withdrawn. However, upon further consideration, a new ground(s) of rejection is made in

view of Mattis et al. (US 6,128,623), set forth below.

3.   Applicant's arguments and amendments, see page 10, filed 11/16/07, with

respect to the rejection of claims 15-28 under 35 U.S.C. § 101 have been fully

considered and are persuasive. The rejection of those claims has been withdrawn.

However, it is noted that this withdrawal has been made in reliance on Applicant's

amendment to the specification as an express disclaimer of computer readable storage

media comprising "a signal received from a network such as the Internet".

Claim Rejections - 35 USC § 112

4.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly
> claiming the subject matter which the applicant regards as his invention.

5.   Claims 15-28 are rejected under 35 U.S.C. 112, second paragraph, as being

indefinite for failing to particularly point out and distinctly claim the subject matter which

applicant regards as the invention.

6.   Regarding claims 15-28, the term "computer-readable storage medium" renders

the claims indefinite because the specification describes "computer-readable media" as

including "other forms of ROM or RAM ... later developed" (¶34). Since the claims

include elements not actually disclosed (those encompassed by "other forms ... later

developed"), the scope of the claims is unascertainable.

Claim Rejections - 35 USC § 103

7.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

8.   Claims 1-3, 6-13, 15-17, 20-27, 29-31, 34, 35, 37, 39 and 40 are rejected under

are rejected under 35 U.S.C. 103(a) as being unpatentable over Gheith (U.S. Patent

Number 7,082,454) in view of Mattis et al. (US 6,128,623).

9.   In considering claim 1, Gheith discloses a method in a data processing system

for facilitating reuse of data blocks, the method comprising the steps of:

receiving from a client program a data block request identifying a data block (col

5, lines 29-32, receiving a URL request);

obtaining constituent data that comprises the data block (the system determines

that the requested webpage is not cached and retrieves it, Col 5, lines 32-35 and Col 6,

lines 18-21) and deriving a data block identifier related to the data (deriving a state

signature for the data using a hash function, Col 6, lines 21-50);

determining whether the data block is a registered data block in a collection of

data blocks using the data block identifier (the system determines whether the

requested webpage is cached based on the state signature when a partial URL and

associated state information is provided in the request, Col 4, line 55 – Col 5, line 36

and Col 6, lines 26-39);

when the data block is not a registered data block, registering the data block in

the collection of data blocks (caching the document and adding it to the look-up table,

Col. 6, lines 26-39);

generating a registration reference for accessing the data block (deriving a state

signature for the data using a hash function, Col 6, lines 21-50); and

returning the registration reference to the client program (the computed

signatures and/or state information are embedded in the requested webpage and sent

to the client, Col 7, lines 3-20).

Gheith disclosed that the invention substantially as claimed however Gheith

failed to explicitly recite deriving a data block identifier for the data block from the

constituent data for the data block. Instead Gheith disclosed determining the identifier

based on the state information and the file name requested.

Mattis discloses a similar system for caching data and teaches deriving a data

block identifier from the constituent data of the data block (col. 8, ll. 28-51). This would

have been an advantageous addition to the system disclosed by Gheith since it allows

the system to perform a comparison with the cache entries in order to quickly tell if the

particular data block is already cached (col. 8, ll. 48-50).

Therefore, it would have been obvious to one of ordinary skill in the art at the

time of Applicant's to incorporate Mattis' data identifier comparison scheme within

Gheith's system in order to detect duplicate objects in the cache, even if the objects

have different names.

10.   In considering claim 2, Gheith further discloses that the step of receiving

comprises receiving from the client program a request data object comprising a data

block identifier and at least one of the data block and a pointer to the data block (Col 7,

lines 3-20, i.e. the client requests the embedded files by referring to a file identifier

which is a pointer embedded in the webpage).

11.   In considering claim 3, Mattis further discloses that the step of deriving comprises

the step of generating a codeword based on the constituent data (object key)(col 8, ll.

36-38).

12.   In considering claim 6, Gheith further discloses that the step of deriving further

comprises the step of deriving the data block identifier based additionally on data block

characteristic information (e.g. a state signature for the data, Col 6, lines 21-50).

13.   In considering claim 7, Gheith further discloses that the collection of data blocks

is a linked list of data blocks (e.g. look-up table; Col 6, lines 21-50).

14.   In considering claim 8, Gheith further discloses that the step of receiving

comprises the step of receiving the data block request at a registration server from a

requesting program (e.g. receiving the request from a client browser).

15.   In considering claim 9, Gheith further discloses that the step of registering

comprises the step of adding the data block to a linked list of additional data blocks that

comprises the collection of data blocks (e.g. look-up table; Col 6, lines 21-50).

16.   In considering claim 10, Gheith further discloses that the step of generating a

registration reference comprises the step of generating one of a pointer and a handle to

the data block (i.e. a link or pointer embedded in the page, Col 7, lines 3-20).

17.   In considering claim 11, Gheith further discloses that the step of generating a

registration reference comprises the step of generating a registration handle object

comprising a reference to a resource allocated for the data block (i.e. a link or pointer

embedded in the page, Col 7, lines 3-20).

18.   In considering claim 12, Gheith further discloses that the resource is one of a

memory area allocated for the data block and a process started in connection with the

data block (i.e. a link or pointer embedded in the page, Col 7, lines 3-20).

19.   In considering claim 13, Mattis further discloses that the step of determining

comprises the step of comparing the data block identifier against additional data block

identifiers for additional data blocks in the collection of data blocks (object keys are

compared to identify duplicate objects)(col. 8, ll. 48-52).

20.   Claims 15-17 and 20-27 are rejected under the same rationale as claims 1-3 and

6-13, respectively, since they recite substantially identical subject matter. Any

differences between the claims do not result in patentably distinct claims and all of the

limitations are taught by the above cited art.

21.   In considering claim 29, Gheith discloses a method in a data processing system

for facilitating reuse of data blocks, the method comprising the steps of:

generating at a requesting program a request data object based on a requested

data block, the requests data object including at least one of binary data of the

requested data block and an initial reference to the binary data of the requested data

block (client generates a URL for a requested data block)(col. 5, ll. 29-32);

communicating the request data object to a determination component;

receiving at the determination component the request data object (URL is sent

to/received by server)(col. 5, ll. 29-32);

obtaining a request data block identifier for the requested data block (deriving a

state signature for the data using a hash function)(col. 6, ll. 21-50);

determining, based on the request data block identifier, whether the requested data

block is a registered data block represented by an existing request data object in a

request data object collection (the system determines whether the requested webpage

is cached based on the state signature when a partial URL and associated state

information is provided in the request)(col. 4, l. 55 to col. 5, l. 36 & col. 6, ll. 26-39);

when the data block is not a registered data block, registering the request data

object in the collection of data blocks by generating a new request data object based on

the request data object and inserting the new request data object into the request data

object collection (a copy of the document is cached and adding it to the look-up

table)(col. 6, ll. 26-39);

generating a registration handle object for accessing the data block (deriving a

state signature for the data using a hash function)(col. 6, ll. 21-50), the registration

handle object comprising at least one of the binary data of the requested data block, the

initial reference to binary data of the requested data block, and an existing reference to

binary data of the requested data block (state signature is a reference to the binary

data)(col. 6, ll. 21-50); and

returning the registration handle object to the requesting program (the computed

signatures and/or state information are embedded in the requested webpage and sent

to the client)(col. 7, ll. 3-20).

Gheith disclosed that the invention substantially as claimed however Gheith

failed to explicitly recite deriving a data block identifier for the data block from the

constituent data for the data block. Instead Gheith disclosed determining the identifier

based on the state information and the file name requested.

Mattis discloses a similar system for caching data and teaches deriving a data

block identifier from the constituent data of the data block (col. 8, ll. 28-51). This would

have been an advantageous addition to the system disclosed by Gheith since it allows

the system to perform a comparison with the cache entries in order to quickly tell if the

particular data block is already cached (col. 8, ll. 48-50).

Therefore, it would have been obvious to one of ordinary skill in the art at the

time of Applicant's to incorporate Mattis' data identifier comparison scheme within

Gheith's system in order to detect duplicate objects in the cache, even if the objects

have different names.

22.   In considering claim 30, Gheith further discloses releasing duplicate resources

(Col 7, lines 23-31).

23. In considering claim 31, Mattis further discloses that the step of deriving comprises the step of generating a codeword based on the constituent data (object key)(col 8, II. 36-38).

24. In considering claim 34, Gheith discloses a data processing system comprising:

a memory comprising a determination component comprising instructions that ascertain whether a requested data block is represented by existing registration data objects based on a data block identifier for the requested data block (the system determines whether the requested webpage is cached based on the state signature when a partial URL and associated state information is provided in the request, Col 4, line 55 – Col 5, line 36 and Col 6, lines 26-39), a filing component comprising instructions that register the requested data block with a new registration data object when the requested data block is not represented by existing registration data objects (caching the document and adding it to the look-up table, Col. 6, lines 26-39), and a handle object component comprising instructions that return a registration handle object (deriving a state signature for the data using a hash function, Col 6, lines 21-50) to a requesting program that specifies a resource associated with the requested data block (the computed signatures and/or state information are embedded in the requested webpage and sent to the client, Col 7, lines 3-20); and

a processing unit that runs the determination component, filing component, and

handle object component (all operations are performed by the server, which has a

processing unit)(Col 4, lines 61-65).

Gheith disclosed that the invention substantially as claimed however Gheith

failed to explicitly recite deriving a data block identifier for the data block from the

constituent data for the data block. Instead Gheith disclosed determining the identifier

based on the state information and the file name requested.

Mattis discloses a similar system for caching data and teaches deriving a data

block identifier from the constituent data of the data block (col. 8, ll. 28-51). This would

have been an advantageous addition to the system disclosed by Gheith since it allows

the system to perform a comparison with the cache entries in order to quickly tell if the

particular data block is already cached (col. 8, ll. 48-50).

Therefore, it would have been obvious to one of ordinary skill in the art at the

time of Applicant's to incorporate Mattis' data identifier comparison scheme within

Gheith's system in order to detect duplicate objects in the cache, even if the objects

have different names.

25.   In considering claim 35, Mattis further discloses that the step of deriving

comprises the step of generating a codeword based on the constituent data (object

key)(col 8, ll. 36-38).

26.   In considering claim 37, Gheith further discloses an analysis component

comprising instructions that examine the registration handle object to determine whether

a client terminal received the requested data block in response to an earlier request

(Col 5, lines 13-24).

27.   In considering claim 39, Gheith further disclose releasing duplicate resources

allocated to the requested data block based on a resource reference provided in the

registration handle object (Col 7, lines 23-31).

28.   In considering claim 40, Gheith discloses a data processing system for facilitating

reuse of data blocks, the data processing system comprising:

       means for receiving from a requesting program a request data object that

identifies a data block (col 5, lines 29-32, receiving a URL request) and for determining

whether the data block is registered in a data block collection based on a data block

identifier for the data block (the system determines whether the requested webpage is

cached based on the state signature when a partial URL and associated state

information is provided in the request, Col 4, line 55 – Col 5, line 36 and Col 6, lines 26-

39);

       means for registering the data block in the data block collection (caching the

document and adding it to the look-up table, Col. 6, lines 26-39);

       means for generating a registration handle object referencing the data block

(deriving a state signature for the data using a hash function, Col 6, lines 21-50 and

transmitting the registration handle object to the requesting program (the computed

signatures and/or state information are embedded in the requested webpage and sent

to the client, Col 7, lines 3-20).

Gheith disclosed that the invention substantially as claimed however Gheith

failed to explicitly recite deriving a data block identifier for the data block from the

constituent data for the data block. Instead Gheith disclosed determining the identifier

based on the state information and the file name requested.

Mattis discloses a similar system for caching data and teaches deriving a data

block identifier from the constituent data of the data block (col. 8, ll. 28-51). This would

have been an advantageous addition to the system disclosed by Gheith since it allows

the system to perform a comparison with the cache entries in order to quickly tell if the

particular data block is already cached (col. 8, ll. 48-50).

Therefore, it would have been obvious to one of ordinary skill in the art at the

time of Applicant's to incorporate Mattis' data identifier comparison scheme within

Gheith's system in order to detect duplicate objects in the cache, even if the objects

have different names.

29.   Claims 4, 5, 18, 19 and 36 rejected under 35 U.S.C. 103(a) as being

unpatentable over Gheith (US 7,082,454) in view of Mattis et al. (US 6,128,623) further

in view of Official Notice.

30.   In considering claims 4, 5, 18, 19 and 36, although the system taught by Gheith

discloses substantial features of the claimed invention, it does not disclose that the data

block identifier is derived in part based on a CRC or ADLER codeword.

The Examiner takes Official notice that CRC and ADLER checksums are old and

well known hash function output types. One of ordinary skill in the art would have

immediately recognized that these types of hash functions could be used as the has

function taught by Mattis (col. 8, ll. 28-52), and that it would have been advantageous to

do so since they are well known and readily available algorithms.

Therefore, it would have been obvious to use the CRC or ADLER checksum as

the object key since these types of hash functions are old and well known has function

variations.

Allowable Subject Matter

31.   Claims 14 32, 33 and 38 are objected to as being dependent upon a rejected

base claim, but would be allowable if rewritten in independent form including all of the

limitations of the base claim and any intervening claims.
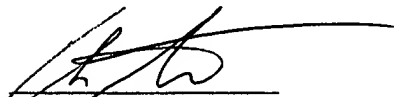

32.   Claim 28 would be allowable if rewritten to overcome the rejection(s) under 35

U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the

limitations of the base claim and any intervening claims.

Conclusion

33.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aaron Strange whose telephone number is 571-272-3959. The examiner can normally be reached on M-F 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glen Burgess can be reached on 571-272-3949. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Aaron Strange
GAU 2153
1/25/08